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EXAMINER

LE, DUY K

ART UNIT	PAPER NUMBER
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2685

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9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,001

Applicant(s)

BACK ET AL.

Examiner

Duy K Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to amendment filed on May 5, 2004.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7, 16, 18-20, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Rabe et al. (U.S. Patent 5,764,730).

As to claim 1, the Rabe reference discloses a method for managing subscriber identities in a mobile communication network where one and the same mobile station (MS) uses one or more subscriber identities ("a radiotelephone (303) comprises a plurality of subscriber identities (306-308) operative in a radiotelephone system (300) at the same time" (Abstract, lines 1-3)), including the steps of:

dividing the location management functions associated with a mobile station (MS) into at least two parts of which at least one is reserved as common to a plurality of connections of the subscriber identities in one and the same mobile station (MS) and at least one other part is reserved as separate for each connection of the plural connections of the subscriber identities in one and the same mobile station (MS) ("in FIG. 5 the radiotelephone 303 registers, with the radiotelephone network 301, the plurality of subscriber identities 306-308 associated with the

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radiotelephone 303” (Col. 9, lines 20-23). Generally registration has two purposes. The first purpose is to determine which subscriber identities 306-308 are active in the radiotelephone system” (Col. 9, lines 51-53). “The second purpose is to allow for automatic roaming between radiotelephone networks” (Col. 9, lines 55-57). “In addition, systems that require some sort of registration, such as the GSM system, may require reregistration of a subscriber identity 306-308 whenever that subscriber identity is activated, and deregistration of a subscriber identity 306-308 whenever that subscriber identity is deactivated. The system may allow the radiotelephone 303 to register more than one subscriber identity 306-306 at a time, or limit the radiotelephone 303 to registering each subscriber identity 306-308 independently” (Col. 9, line 62 to Col. 10, line 3). “Alternately, the radiotelephone 303 could perform one registration procedure in which all subscriber identities 306-308 active in that radiotelephone are registered at once. This could be accomplished by allowing multiple subscriber identities 306-308 to be included in the registration message sent from the radiotelephone 303 to the radiotelephone network 301” (Col. 10, lines 12-19)). The common or coordinating part of the location management functions is the radiotelephone 303 that registers all active subscriber identities at once for location management (“the second purpose [of registration] is to allow for automatic roaming between radiotelephone networks” (Col. 9, lines 55-57)). The subscriber-specific or dedicated part of the location management functions is used to register each subscriber identity independently or deregister of a subscriber identity when it is deactivated); and

managing the plural connections of the subscriber identities in the mobile station (MS) through a common identity (“at step 602, the radiotelephone 303 receives an indication of an incoming call for the first subscriber identity 306. An indication of an incoming call could be a

signal or a message sent by the radiotelephone network 301 to the radiotelephone 303, indicating to the radiotelephone 303 that a call connection should be initiated. In the preferred embodiment, the incoming call indication is provided by a page message” (Col. 10, lines 26-33). “At step 603 the radiotelephone 303 deregisters the second subscriber identity 307 responsive to the step of receiving the indication of the incoming call” (Col. 10, lines 37-39). “Once the radiotelephone 303 is active in a call with a subscriber identity 306, that radiotelephone is unable to listen for pages for a second subscriber identity 307. If the radiotelephone network 301 attempts to page the second subscriber identity 307, the page will go unanswered” (Col. 10, lines 44-48)).

As to claim 2, the Rabe reference discloses the method of claim 1, further comprising the step of handling functions common to the subscriber identities in one and the same mobile station (MS) are handled through at least one MM layer part (“the plurality of subscriber identities 306-308 includes first 306 and second 307 subscriber identities. The flowchart 600 generally describes how the radiotelephone 303 processes an incoming call” (Col. 10, lines 22-25). “At step 602, the radiotelephone 303 receives an indication of an incoming call for the first subscriber identity 306. An indication of an incoming call could be a signal or a message sent by the radiotelephone network 301 to the radiotelephone 303, indicating to the radiotelephone 303 that a call connection should be initiated. In the preferred embodiment, the incoming call indication is provided by a page message” (Col. 10, lines 26-33). “Once the radiotelephone 303 is active in a call with a subscriber identity 306, that radiotelephone is unable to listen for pages for a second subscriber identity 307” (Col. 10, lines 44-46)).

As to claim 3, the Rabe reference discloses the method of claim 2, further comprising the step of using the common part of the MM layer is used for the paging of the subscriber identities

of a mobile station (“at step 602, the radiotelephone 303 receives an indication of an incoming call for the first subscriber identity 306. An indication of an incoming call could be a signal or a message sent by the radiotelephone network 301 to the radiotelephone 303, indicating to the radiotelephone 303 that a call connection should be initiated. In the preferred embodiment, the incoming call indication is provided by a page message” (Col. 10, lines 26-33)).

As to claim 4, the Rabe reference discloses the method of claim 1, wherein the equipment identity of the mobile station functions as the common identity of the subscriber identities in one and the same mobile station in the common part of the MM layer (“the radiotelephone network 301 determines that the subscriber identities 306 and 307 are both associated with the same radiotelephone 303 by looking in a database associating the two. The database can be compiled by various means. For example, each time a radiotelephone 303 registers a subscriber identity 306-308, the radiotelephone network 301 can request the hardware identity of the radiotelephone 303, and enter the pairing of the subscriber identities 306-308 and hardware identities in a database” (Col. 12, lines 56-64)).

As to claim 5, the Rabe reference discloses the method of claim 1, wherein the common identity of the subscriber identities in one and the same mobile station (MS) is one of the subscriber identities belonging to the mobile station in the common part of the MM layer (“more than one subscriber identity 306-308 may be handled on one radiotelephone 303 by forwarding an incoming call for a first subscriber identity 306, associated with the radiotelephone 303, to a second subscriber identity 307 associated with the radiotelephone 303” (Col. 11, lines 46-50). “For example, if all incoming calls for the first subscriber identity 306 are forwarded to the second subscriber identity 307, and both subscriber identities are active in one radiotelephone,

and the second subscriber identity 307 is active in a call, calls for the first subscriber identity 306 would be forward to the second subscriber identity 307, which would result in initiation of busy signal procedure” (Col. 11, line 66 to Col. 12, line 6). “Forwarding incoming calls can also cause all incoming calls for any subscriber identity 306-308 active in a radiotelephone 303 to ring one standard telephone set” (Col. 12, lines 8-11). As interpreted by examiner, the forwarded subscriber identity (e.g., 307) is the common identity in the mobile station).

As to claim 6, the Rabe reference discloses the method of claim 1, further comprising the step of paging said subscriber identities in one and the same mobile station (MS) are paged using one paging channel (“at step 602, the radiotelephone 303 receives an indication of an incoming call for the first subscriber identity 306. An indication of an incoming call could be a signal or a message sent by the radiotelephone network 301 to the radiotelephone 303, indicating to the radiotelephone 303 that a call connection should be initiated. In the preferred embodiment, the incoming call indication is provided by a page message” (Col. 10, lines 26-33)).

As to claim 7, the Rabe reference discloses the method of claim 1, further comprising the step of storing the information about the common identity of the subscriber identities in one and the same mobile station is stored in a core network (“the radiotelephone network 301 determines that the subscriber identities 306 and 307 are both associated with the same radiotelephone 303 by looking in a database associating the two. The database can be compiled by various means. For example, each time a radiotelephone 303 registers a subscriber identity 306-308, the radiotelephone network 301 can request the hardware identity of the radiotelephone 303, and enter the pairing of the subscriber identities 306-308 and hardware identities in a database” (Col. 12, lines 56-64)).

As to claim 16, the Rabe reference discloses the method of claim 1, further comprising the step of including at least the information about the common identity in a paging message when paging subscriber identities (“at step 602, the radiotelephone 303 receives an indication of an incoming call for the first subscriber identity 306. An indication of an incoming call could be a signal or a message sent by the radiotelephone network 301 to the radiotelephone 303, indicating to the radiotelephone 303 that a call connection should be initiated. In the preferred embodiment, the incoming call indication is provided by a page message” (Col. 10, lines 26-33). The paging message is directed to, and thus inherently includes information about the radiotelephone 303 (the common identity) so that the radiotelephone 303 knows that a call connection should be initiated).

As to claim 18, Figure 4 in Rabe shows a system for realizing location management functions of mobile stations (MS) having more than one subscriber identity, comprising a first element for realizing the common functions of plural connections of the subscriber identities of each mobile station (MS) and at least one other element for realizing subscriber-specific functions of each of the plural connections of the subscriber identities (“in the preferred embodiment the radiotelephone network 301 has a memory unit 443 for storing information associating the plurality of subscriber identities 306-308 with one radiotelephone 303. Using the subscriber information stored in the memory unit 443, the radiotelephone network 301 can determine if a call is in progress to any one of the multiple subscriber identities 306-308 associated with a single radiotelephone 303. With this information, the radiotelephone network 301 may determine that the subscriber radiotelephone system 400 is already occupied with a call and is not available to accept the incoming call” (Col. 8, lines 44-54). “The plurality of

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subscriber identities 306-308 includes first 306 and second 307 subscriber identities. The flowchart 600 generally describes how the radiotelephone 303 processes an incoming call” (Col. 10, lines 22-25). “At step 602, the radiotelephone 303 receives an indication of an incoming call for the first subscriber identity 306. An indication of an incoming call could be a signal or a message sent by the radiotelephone network 301 to the radiotelephone 303, indicating to the radiotelephone 303 that a call connection should be initiated. In the preferred embodiment, the incoming call indication is provided by a page message” (Col. 10, lines 26-33). “Once the radiotelephone 303 is active in a call with a subscriber identity 306, that radiotelephone is unable to listen for pages for a second subscriber identity 307” (Col. 10, lines 44-46)).

As to claim 19, the Rabe reference discloses a network element for realizing location management functions of mobile stations having more than one subscriber identity, comprising a first element for realizing the common functions of plural connections of the subscriber identities of each mobile station and at least one other element for realizing subscriber-specific functions of each of the plural connections of the subscriber identities (“the radiotelephone network includes a plurality of base stations coupled to a central switching center (network element) that typically interfaces with the conventional telephone network system” (Col. 1, lines 45-47). “In the preferred embodiment the radiotelephone network 301 has a memory unit 443 for storing information associating the plurality of subscriber identities 306-308 with one radiotelephone 303. Using the subscriber information stored in the memory unit 443, the radiotelephone network 301 can determine if a call is in progress to any one of the multiple subscriber identities 306-308 associated with a single radiotelephone 303. With this information, the radiotelephone network 301 may determine that the subscriber radiotelephone system 400 is already occupied with a call

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and is not available to accept the incoming call” (Col. 8, lines 44-54). “The radiotelephone network 301 determines that the subscriber identities 306 and 307 are both associated with the same radiotelephone 303 by looking in a database associating the two. The database can be compiled by various means. For example, each time a radiotelephone 303 registers a subscriber identity 306-308, the radiotelephone network 301 can request the hardware identity of the radiotelephone 303, and enter the pairing of the subscriber identities 306-308 and hardware identities in a database” (Col. 12, lines 56-64)).

As to claim 20, the Rabe reference discloses the network element of claim 19, wherein the network element is a mobile switching center (MSC) (“the radiotelephone network includes a plurality of base stations coupled to a central switching center (MSC) that typically interfaces with the conventional telephone network system” (Col. 1, lines 45-47)).

As to claim 22, Figure 3 in Rabe shows a mobile station (303) arranged so as to use more than one subscriber identity (306-308), comprising a first element for realizing common functions to a plurality of connections of the subscriber identities and at least one other element for realizing the specific functions of each of the plural connections of the subscriber identities (“in FIG. 5 the radiotelephone 303 registers, with the radiotelephone network 301, the plurality of subscriber identities 306-308 associated with the radiotelephone 303” (Col. 9, lines 20-23). Generally registration has two purposes. The first purpose is to determine which subscriber identities 306-308 are active in the radiotelephone system” (Col. 9, lines 51-53). “The second purpose is to allow for automatic roaming between radiotelephone networks” (Col. 9, lines 55-57). “The radiotelephone network 301 determines that the subscriber identities 306 and 307 are both associated with the same radiotelephone 303 by looking in a database associating the two.

The database can be compiled by various means. For example, each time a radiotelephone 303 registers a subscriber identity 306-308, the radiotelephone network 301 can request the hardware identity of the radiotelephone 303, and enter the pairing of the subscriber identities 306-308 and hardware identities in a database” (Col. 12, lines 56-64)).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-10, 13-15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,764,730 to Rabe et al. in view of Young et al. (U.S. Patent 6,324,405).

As to claim 8, the Rabe reference discloses the method of claim 7. However, it does not disclose that the information about the common identity is stored in a HLR register. The Young reference teaches in the core network, the information about the common identity is stored in a HLR register (“the store 54 contains, for every subscriber terminal apparatus 2, a record showing the current status of the terminal 2” (Col. 9, lines 9-11). “The store 54 acts somewhat in the manner of the Home Location Register (HLR) of a GSM terrestrial cellular system” (Col. 12, lines 36-38)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Rabe wherein the information about the

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common identity is stored in a HLR register, as taught by Young, in order to be able to direct incoming calls to a user in the GSM system.

As to claim 9, Rabe-Young discloses the method of claim 8. The Young reference further discloses the step of updating the information about the common identity in the HLR register ("a store 330 commonly accessible by all the baseband signal processing units 324, and containing an entry for each of the user terminals 322 indicating of the subscriber last registered at that user terminal. On each occasion when an SIM 35 is inserted into the card reader 33, the identity stored thereon is transmitted to the store 330 and stored at the location for the corresponding user terminal 322" (Col 16, lines 13-2). "The baseband processor 324 accesses the store 330 and updates (if necessary) the ID record stored for the user terminal 322 from which the call originates" (Col. 16, lines 63-65)).

As to claim 10, Rabe-Young discloses the method of claim 9. The Young reference further discloses the step of updating is performed in conjunction with a location update ("the earth station node 6 determines (step 3010) whether the location update signal includes a multi-carrier IMEI code, and if so, the earth station node 6 reads the list of subscribers sharing that IMEI code stored in the database 48 (step 3012) and accesses the records for all subscribers on the list (step 3014) to update their current satellite, beam and position data to the values received within the location updating signal" (Col. 15, lines 24-31)).

As to claim 13, the Rabe reference discloses the method of claim 1. However, it does not disclose the step of transmitting, by the mobile station (MS), a location update request including subscriber identity information and indicator information indicating whether the location update request has been transmitted for every subscriber identity. The Young reference teaches the step

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of transmitting, by the mobile station (MS), a location update request including subscriber identity information and indicator information indicating whether the location update request has been transmitted for every subscriber identity ("the location update request includes an ID code indicating the mobile terminal and further includes the location area identifier (LAI) received by the mobile terminal 2 on the broadcast control channel (BCCH)" (Col. 10, line 54-60).

"Additionally, in this embodiment, the mobile terminal may depart from the GSM location update message format, by including a field indicating its own position as position coordinates, if it has this information available" (Col. 10, lines 61-64). "The processors 37 of the user terminals 320 are arranged not to voluntarily perform location updating. Instead, location updating is performed by the control unit 348 of the RF stage 304 acting in the manner of a user terminal. The control unit 348 is arranged, firstly, to scan the BCCH carriers of all beams received by the antenna system 302 and to perform location updating as described above whenever a new location identifier (LAI) is detected" (Col. 14, lines 46-53). "Each location update message contains (in addition to the LAI code) the position according to the positioning system 314; and the equipment identifier code IMEI" (Col. 14, lines 63-65)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Rabe to further comprise the step of transmitting, by the mobile station (MS), a location update request including subscriber identity information and indicator information indicating whether the location update request has been transmitted for every subscriber identity, as taught by Young, in order to update the positions of all subscribers registered via an user terminal.

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As to claim 14, Rabe-Young discloses the method of claim 9. The Young reference further teaches that the location update for the subscriber identities is carried out through the coordinating part of the MM layer ("the processors 37 of the user terminals 320 are arranged not to voluntarily perform location updating. Instead, location updating is performed by the control unit 348 of the RF stage 304 acting in the manner of a user terminal. The control unit 348 is arranged, firstly, to scan the BCCH carriers of all beams received by the antenna system 302 and to perform location updating as described above whenever a new location identifier (LAI) is detected" (Col. 14, lines 46-53)).

As to claim 15, Rabe-Young discloses the method of claim 9. The Young reference further teaches that a HLR register corresponding to each particular subscriber identity transmits the location information of the subscriber identity to the HLR register corresponding to the common identity ("subscriber data on a given user and/or user terminal is stored in a specific HLR for that user" (Col. 2, lines 9-10). "On first receipt of a registration with a multi carrier equipment identity code, a new list of subscribers is created for that IMEI code (corresponding to the subscribers within the vehicle 300). Any subsequent different entities (i.e. having different mobile subscriber identity codes) with the same equipment identity code are added to the list" (Col. 15, lines 8-13). "The earth station node 6 reads the list of subscribers sharing the IMEI code stored in the database 48 (step) 3012) and accesses the records for all subscribers on the list (step 3014) to update their current satellite, beam and position data to the values received within the location updating signal" (Col. 15, lines 27-31)).

As to claim 17, the Rabe reference discloses the method of claim 1 and paging a subscriber identity. However, it does not disclose the step of including one of an IMSI code,

TMSI code and an IMEI code when paging a subscriber identity. The Young reference teaches the step of including one of an IMSI code, TMSI code and an IMEI code when paging a subscriber identity ("the location update request includes an ID code indicating the mobile terminal (equivalent to the international mobile subscriber identity (IMSI) or temporary mobile subscriber identity (TMSI) used in the GSM system)" (Col. 10, line 54-57). "Each location update message contains (in addition to the LAI code) the position according to the positioning system 314; and the equipment identifier code IMEI" (Col. 14, lines 63-65)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Rabe to further comprise the step of including one of an IMSI code, TMSI code and an IMEI code when paging a subscriber identity, as taught by Young, in order to indicate an incoming call to the subscriber identity in the mobile station.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,764,730 to Rabe et al. in view of Young et al. (U.S. Patent 6,324,405) and further in view of Le et al. (U.S. Patent 6,556,820).

As to claim 11, Rabe-Young discloses the method of claim 9. However, it does not disclose the step of updating is performed in conjunction with a terminating connection. The Le reference teaches the step of updating is performed in conjunction with a terminating connection ("when a USIM is no longer anchored (due to release of circuit connection), the MS 1610 does a location area update for the USIM by sending a LAU REQ 1612 with the TMSI and a USIMS that specifies the USIM in question. The new MSC/VLR 1630 updates the list of anchored USIMs and initiates a MAP Location Update 1660 procedure" (Col. 13, lines 58-63)).

“Subsequent Location Area Update procedure use the Base TMSI, which is common to all USIMs in the OLRU” (Col. 14, lines 8-10)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Rabe-Young wherein the step of updating is performed in conjunction with a terminating connection, as taught by Le, in order to selectively update location of those USIMs which no longer have active circuit connection.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,764,730 to Rabe et al. in view of Young et al. (U.S. Patent 6,324,405) and further in view of Sjodin (U.S. Patent 6,631,140).

As to claim 12, Rabe-Young discloses the method of claim 9. However, it does not disclose the information about the common identity is updated in a MAP message. The Sjodin reference teaches use of a MAP interface to update the information about the common identity (Figure 2; “mobile application part (MAP) interfaces are introduced into the mobility servers 48 and 52, respectively. The MAP is specified in European Telecommunications Standard (ETS) 300599, GSM 09.02 version 4.11.1, November 1995” (Col. 7, lines 61-64). “Five conventional MAP operations are supported by the MAP interface. Namely, update location (which is termed “registration notification” in IS-41), insert subscriber data, delete subscriber data, cancel location, and provide roaming number (termed “routing request” in IS-41) operations are supported by the MAP interface” (Col. 8, lines 2-8)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Rabe-Young wherein the information about the

common identity is updated in a MAP message, as taught by Sjodin, in order to provide a standard interface for communicating with an HLR for different operations.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,764,730 to Rabe et al. in view of Le et al. (U.S. Patent 6,556,820).

As to claim 21, the Rabe reference discloses the network element of claim 19. However, it does not disclose the network element is a radio network controller (RNC). The Le reference teaches the network element is a radio network controller (RNC) ("FIG. 8 illustrates the general UMTS architecture 800. The UMTS counterpart to the Base Station Controller (BSC) 820 is the Radio Network Controller (RNC) 822" (Col. 10, lines 17-23). "The Base Station Controller 132 manages the radio resources for one or more BTSs 130. The BSC 132 handles radio-channel setup, frequency hopping, and handovers" (Col. 6, lines 41-44). "The mobile unit 310 requests and is granted a channel by the BSS 320. Although not shown in this figure, the BRTS sends a signal to the BSC as part of this process (in FIG. 3, these two systems are combined into the BSS 320). In event 3, the mobile unit requests a location update, which must be passed to the MSC 322" (Col. 7, lines 36-41)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the network element of Rabe wherein the network element is a radio network controller (RNC), as taught by Le, in order to support a UMTS network architecture.

Response to Arguments

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9. Applicant's arguments filed 5/5/04 have been fully considered but they are not persuasive.

With respect to the newly amended independent claim 1, the applicants amended the claim to recite that the location management functions are divided into two parts (subscriber-specific and coordinating parts) and that the common functions that are common to each connection of a subscriber identity use the coordinating part. The applicants argued that Rabe fails to teach or suggest that the location management functions are divided into a subscriber-specific part and a common part. The Rabe reference does teach or suggest that the location management functions are divided into a subscriber-specific part and a common part ("in FIG. 5 the radiotelephone 303 registers, with the radiotelephone network 301, the plurality of subscriber identities 306-308 associated with the radiotelephone 303" (Col. 9, lines 20-23). Generally registration has two purposes. The first purpose is to determine which subscriber identities 306-308 are active in the radiotelephone system" (Col. 9, lines 51-53). "The second purpose is to allow for automatic roaming between radiotelephone networks" (Col. 9, lines 55-57). "In addition, systems that require some sort of registration, such as the GSM system, may require reregistration of a subscriber identity 306-308 whenever that subscriber identity is activated, and deregistration of a subscriber identity 306-308 whenever that subscriber identity is deactivated. The system may allow the radiotelephone 303 to register more than one subscriber identity 306-306 at a time, or limit the radiotelephone 303 to registering each subscriber identity 306-308 independently" (Col. 9, line 62 to Col. 10, line 3). "Alternately, the radiotelephone 303 could perform one registration procedure in which all subscriber identities 306-308 active in that radiotelephone are registered at once. This could be accomplished by allowing multiple

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subscriber identities 306-308 to be included in the registration message sent from the radiotelephone 303 to the radiotelephone network 301” (Col. 10, lines 12-19)). The common or coordinating part of the location management functions is the radiotelephone 303 that registers all active subscriber identities at once for location management (“the second purpose [of registration] is to allow for automatic roaming between radiotelephone networks” (Col. 9, lines 55-57)). The subscriber-specific or dedicated part of the location management functions is used to register each subscriber identity independently or deregister of a subscriber identity when it is deactivated. The applicant specification provides description of location management functions on page 4, lines 5-34 which are similar to what was cited by examiner.

In addition, the applicants argued that Rabe fails to teach or suggest managing the connections of the subscriber-identities using a common identity. The Rabe reference does teach or suggest managing the connections of the subscriber-identities using a common identity (“at step 602, the radiotelephone 303 receives an indication of an incoming call for the first subscriber identity 306. An indication of an incoming call could be a signal or a message sent by the radiotelephone network 301 to the radiotelephone 303, indicating to the radiotelephone 303 that a call connection should be initiated. In the preferred embodiment, the incoming call indication is provided by a page message” (Col. 10, lines 26-33). “At step 603 the radiotelephone 303 deregisters the second subscriber identity 307 responsive to the step of receiving the indication of the incoming call” (Col. 10, lines 37-39). “Once the radiotelephone 303 is active in a call with a subscriber identity 306, that radiotelephone is unable to listen for pages for a second subscriber identity 307. If the radiotelephone network 301 attempts to page the second subscriber identity 307, the page will go unanswered” (Col. 10, lines 44-48)).

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Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy K Le whose telephone number is 703-305-5660. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Duy Le
July 23, 2004


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